

# County of Santa Clara

Department of Planning and Development  
Planning Office

County Government Center, East Wing, 7th Floor  
70 West Hedding Street  
San Jose, California 95110-1705  
(408) 299-5770 FAX (408) 288-9198  
www.sccplanning.org



October 15, 2015

Ms. Christina Reese  
State Office of Mine Reclamation  
801 K Street MS 09-06  
Sacramento, CA 95814

## VIA CERTIFIED MAIL

**Subject: 2015 SMARA Inspection Report for the Permanente Quarry  
County Planning Office File 2250-15PAM  
State Mine ID #91-43-0004**

Dear Ms. Reese:

Enclosed for your records is a copy of the 2015 SMARA inspection report for the Permanente Quarry. The report includes the following list of documents prepared regarding Permanente Quarry:

1. SMARA Lead Agency Inspection Notice Form.
2. MRRC-1 form.
3. Attachment A, which includes detailed information and photographs from the field inspection on September 3, 2015.
4. Aerial Photo, dated March 2015.

The County has completed its review of this mine's Financial Assurance Cost Estimate (FACE). I will forward a copy, as well as the County certification under a separate letter to Office of Mine Reclamation.

If you have any questions regarding this matter please feel free to call me at (408) 299-5784.

Sincerely,

A handwritten signature in cursive script that reads "Marina Rush".

Marina Rush, Planner III

cc: Kirk Girard, Director  
Sam Barkett, III, Lehigh Southwest Cement





Department of Conservation  
OFFICE OF MINE RECLAMATION

SMARA LEAD AGENCY INSPECTION NOTICE FORM

(This form is provided for the convenience of lead agencies. See instructions on the back of the form.)

To: Reporting Unit  
California Department of Conservation  
Office of Mine Reclamation  
801 K Street, MS 0906  
Sacramento, CA 95814

From: County of Santa Clara  
Department of Planning and Development  
70 West Hedding Street, East Wing, 7th Floor  
San Jose, CA 95110

Date of this Notice: October 15, 2015

Subject: Lead Agency Inspection Notice Pursuant to PRC 2774(b)

Date of Inspection: Sept. 3, 2015

Mine ID: 91-91-43-0004

I certify that this surface mining operation is in compliance with SMARA (mining operation is permitted [or vested], consistent with reclamation plan, the financial assurance is adequate for reclamation costs, and no violations were cited on the MRRC-1 inspection form\*).

Check applicable box:

Yes  No  - If no, which aspects of the operations are inconsistent with SMARA :

Does the surface mining operation have a review of its reclamation plan, financial assurances, or an interim management plan pending under subdivision (b), (c), (d), or (h) of Section 2770, or an appeal pending before the board or lead agency governing body under subdivision (e) or (h) of Section 2770?

Yes  No

Are the completed MRRC-1 inspection form and any supporting documentation, including, but not limited to, any inspection report prepared by the licensed geologist, civil engineer, landscape architect, or forester, who conducted the inspection attached?

Yes  No

Marina Rush Planner III  
Signature and Title of Lead Agency Representative

\* See instructions on back of form

# INSPECTION NOTICE FORM INSTRUCTIONS

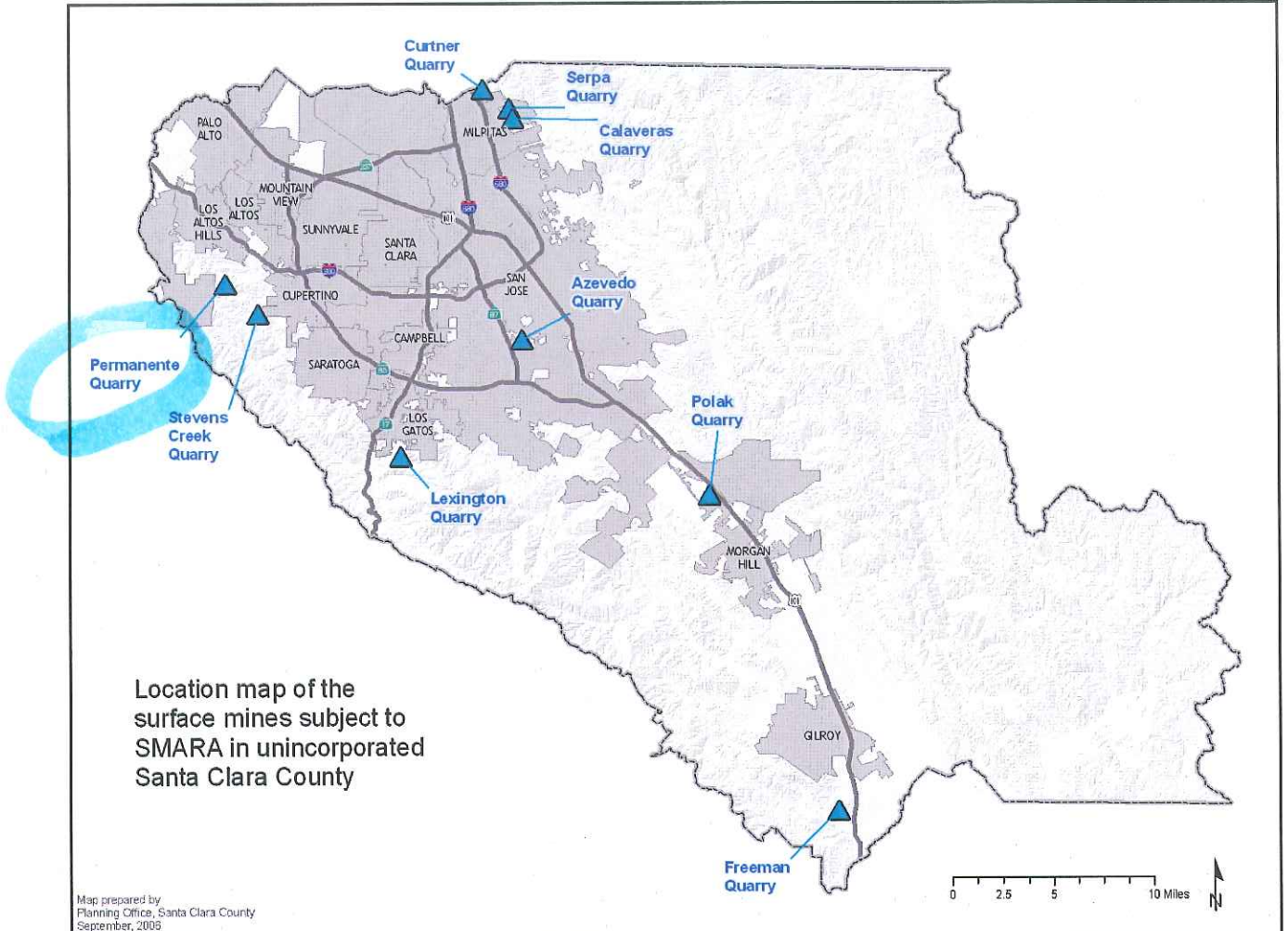
The specific SMARA statute that requires the inspection notice is quoted below:

“PRC 2774 (b) ...The lead agency shall notify the director within 30 days of the date of completion of the inspection that the inspection has been conducted. The notice shall contain a statement regarding the surface mining operation's compliance with this chapter, shall include a copy of the completed inspection form, and shall specify which aspects of the surface mining operations, if any, are inconsistent with this chapter. If the surface mining operation has a review of its reclamation plan, financial assurances, or an interim management plan pending under subdivision (b), (c), (d), or (h) of Section 2770, or an appeal pending before the board or lead agency governing body under subdivision (e) or (h) of Section 2770, the notice shall so indicate. The lead agency shall forward to the operator a copy of the notice, a copy of the completed inspection form, and any supporting documentation, including, but not limited to, any inspection report prepared by the geologist, civil engineer, landscape architect, or forester, who conducted the inspection.”

Please use the attached suggested SMARA LEAD AGENCY INSPECTION NOTICE FORM or your own form or letter format to provide the information required pursuant to PRC 2774(b).

\*Please note whether violations cited in the MRRC-1 have been corrected at the date of this notice.







## SURFACE MINING INSPECTION REPORT

(See reverse side of each form page for completion instructions)

<b>I. Mine Name (As Shown on Approved Reclamation Plan)</b> Permanente Quarry	<b>Inspection Date:</b> 9/3/2015	<b>CA MINE ID#</b> 91- 43-0004
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<b>II. Mine Operator</b> Lehigh Hanson, Inc.		<b>Telephone</b> (408) 996-4269 - office
<b>Onsite Contact Person</b> Sam Barket - Area Environmental Manager		<b>Telephone</b> (408) 202-7534 - cell
<b>Mailing Address</b> 24001 Stevens Creek Blvd.		
<b>City</b> Cupertino	<b>State</b> CA	<b>ZIP Code</b> 95014
<b>E-mail Address (optional)</b> Sam.Barket@LehighHanson.com		

<b>III. Designated Agent</b> Greg Knapp		<b>Telephone</b> 925) 244-6570
<b>Mailing Address</b> 12667 Alcosta Blvd., Suite 400, Bishop Ranch 15		
<b>City</b> San Ramon	<b>State</b> CA	<b>ZIP Code</b> 94583
<b>E-mail Address (optional)</b> Greg.Knapp@hanson.com		

<b>IV. SMARA Lead Agency Name (City, County, BCDC, or SMGB)</b> Santa Clara County		
<b>Inspector</b> Kit Custis (consultant), Marina Rush(Planner, Jim Baker (Geologist), Steve Beams (Inspector)		<b>Telephone</b> (408) 299-5784
<b>Title</b> Planner III	<b>Organization</b> Department of Planning and Development	
<b>Mailing Address</b> 70 W. Hedding Street, East Wing, 7th Floor		
<b>City</b> San Jose	<b>State</b> CA	<b>ZIP Code</b> 95110
<b>E-mail Address (optional)</b> marina.rush@pln.sccgov.org		

<b>V. Does the operation have:</b>	<b>P</b>	<b>NR</b>	<b>No</b>	<b>Yes</b>	
A Permit to Mine	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Permit # - Start and Expiration Dates vested
Vested Right to Mine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Year of Lead Agency determination February 8, 2011
A Reclamation Plan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		RP# 2250-13-66-84P Date Approved March 1985
Reclamation Plan Amendment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		RP Amendment # (as applies) Date Approved or Status of Amendment 2250-13-66-10P(M1) June 26, 2012
Has the Operator filed a Mining Operation Annual Report (Form MRRC-2) this Year? Check One:					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Year of Most Recent Filed Annual Report: 2014

<b>VI. Is this Operation on Federal Land? Check One:</b> If "Yes," Provide One or Both of the Federal Mine Land Identification Numbers Below:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>California Mining Claim Number (CAMC#):</b> N.A.	<b>Latitude/Longitude at Mine Entrance (Decimal Degrees):</b> 37.321036°,-122.086107°		
<b>U.S. Forest Service or BLM Identification Number (Plan of Operations #) :</b> N.A.	<b>Status of Plan of Operations (Current/Expired/In Process):</b> N.A.		



# INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 1 (Rev. 07/13)

This report is intended to comply with the requirements of California's Surface Mining and Reclamation Act (SMARA – Public Resources Code Sections §§ 2710 et seq., and the associated California Code of Regulations found in Title 14, division 2, beginning at § 3500, hereinafter respectively "PRC" or "CCR") and specifically PRC § 2774(b) and CCR § 3504.5 for operations located on private land and/or partly or solely on Bureau of Land Management (BLM) and U.S. Forest Service (USFS) lands (Title 43, parts 3500, 3600, and 3800 of the Code of Federal Regulations). A Memorandum of Understanding between the U.S. Department of Interior, BLM; U.S. Department of Agriculture, USFS; the State of California, Department of Conservation; and the State Mining and Geology Board (SMGB), discusses implementation of SMARA on Federal lands in California that are under the jurisdiction of the BLM and/or the USFS.

As required by PRC § 2774(b) and CCR § 3504.5(g), Lead Agencies shall file an Inspection Notice that includes a statement regarding compliance with SMARA, a copy of this Surface Mining Inspection Report (MRRC-1) and any other supporting documentation with the Department within 30 days of completion of the inspection. The Lead Agency shall also forward a copy of the Inspection Notice, MRRC-1, and any supporting documentation to the operator.

**BLOCK I:** Enter the name of the Mining Operation, the date of the inspection, and the California Mine ID number.

**BLOCK II:** Enter the name of the Mine Operator, mailing address, phone number, name, and email address (optional) of the person to serve as the onsite contact.

**BLOCK III:** Enter the name, mailing address, phone number, and email (optional) of the Designated Agent who, under PRC § 2772(c)(1) and 2207(a)(1), will serve as a contact for any follow-up correspondence or discussions regarding the inspection or noted violations.

**BLOCK IV:** For "Lead Agency," enter the name of the certified SMARA Lead Agency that is conducting this inspection. Acceptable entries include the name of the city, county, Bay Conservation and Development Commission (BCDC), or State Mining and Geology Board (SMGB). For "Organization," enter the name of the agency, firm or other organization that employs the inspector.

**BLOCK V:** Check the appropriate boxes.

P	Pending (on appeal or awaiting approval by Lead Agency)
NR, No, Yes	Not required for this operation at the time this inspection was completed
	No
	Yes, supply information

Note: Where appropriate, to aid in determining when the lead agency recognized that the operation has vested mining rights, inspectors are advised to review older agency correspondence, minutes of lead agency hearings, including agendas and staff reports associated with approvals of any kind related to the mining operation.

**BLOCK VI:** Indicate if the operation is on federal Land; if operation is on federal land, include a California Mining Claim Number and/or a BLM/USFS Identification Number and Plan of Operations Number, if applicable. Give the status of the BLM/USFS Plan of Operations, as indicated. Give the latitude and longitude at the mine entrance in decimal degrees.

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## DISTRIBUTION INSTRUCTIONS:

One copy of the inspection notice and this completed Inspection Report (all pages) shall be given to the Mine Operator and the operator's designated agent by the lead agency (PRC Section 7374(b)).

The Lead Agency must retain the original copy of this Inspection Report and submit one copy of this Inspection Report, along with an original inspection report notice (PRC Subsection 2774(b)), within 30-days of the completion of the inspection, to:

Department of Conservation  
Office of Mine Reclamation  
801 K St MS 09-06 Sacramento, CA 95814-3529

If any part of the operation inspected is on BLM or USFS land, one copy of this Inspection Report should be forwarded to the appropriate BLM or USFS office.

## SURFACE MINING INSPECTION REPORT

<b>VII. Financial Assurance</b>		Inspection Date: <b>9/3/2015</b>	CA MINE ID#: <b>91-43-0004</b>	
Type of Financial Assurance Mechanism(s)	Financial Assurance Mechanism Number(s)	Amount of Mechanism	Date of Expiration	Date of Lead Agency Approval of Mechanism
5 bonds posted: 1&2. Travelers Casualty & Surety Company 3. Liberty Mutual Insurance Company 4. Lexon Insurance Company 5. Fidelity & Deposit Company Bond	1. Bond #64S104790142BCM	\$7,570,047.00	none	1. 10-19-07
	2. Bond #280331	\$540,001.00	none	2. 08-18-10
	3. Bond #022033624	\$18,963,259.00	none	3. 02-03-12
	4. Bond #1066515	\$1,691,220.00	none	4. 01-28-11
	5. Bond #09054091	\$25,958,768.00	none	5. 04-28-14
<b>Total Amount of Mechanism(s)</b>		<b>\$54,723,295.00</b>		
<input checked="" type="checkbox"/> <b>Financial Assurance Mechanism Pending Review by Lead Agency? If yes, provide date submitted/explanation and amount of pending mechanism:</b>  <b>Yes, see below.</b>				
Has there been a change of operator since last inspection? If yes provide the date of notice.  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Date of Change: N/A	If yes, has the new operator posted a Financial Assurance Mechanism? <input type="checkbox"/> Yes <input type="checkbox"/> No  If not, describe status of new operators Financial Assurance Mechanism: N/A		Does new operator's Notice of Change include a statement of responsibility for reclamation?  <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date and Amount of Most Recent Approved Financial Assurance Cost Estimate:	Date: <b>August 2014</b>		Amount: <b>\$54,601,774.00</b>	
<input checked="" type="checkbox"/> Financial Assurance Cost Estimate Pending Review with Lead Agency?	Date Submitted/Explanation/Amount of pending estimate: The operator submitted a FACE at the end of July 2015. Comments sent to operator on August 20, 2015. Revision in progress. The County will forward a certified 2014 FACE to OMR for review, as required under SMARA.			
<input type="checkbox"/> Financial Assurance Cost Estimate Appealed by Operator?	Date Submitted to State Mining and Geology Board or Lead Agency for Appeal/Explanation: N/A			
<input type="checkbox"/> Other?	N/A			



# INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 2 (Rev. 07/13)

**BLOCK VII:** Type of Financial Assurance Mechanism(s): Fill in the type of mechanism(s) that are on file. PRC § 3803 and SMGB Financial Assurance Guideline number 10 describe Surety Bonds, Trust Funds, or Irrevocable Letters of Credit as acceptable financial assurance mechanisms for non-governmental entity operators. For surface mining operations owned and operated by state and local government entities, Surety Bonds, Trust Funds, Irrevocable Letters of Credit, Pledges of Revenue, and Budget Set Aside are acceptable financial assurance mechanisms.

State the Financial Assurance Mechanism(s) document number(s). State the dollar amount of each Financial Assurance Mechanism(s) currently on file. State the date of expiration of the Financial Assurance Mechanism(s) currently on file. State the date of approval for the most recent lead agency approved Financial Assurance Mechanism(s) on file. State the total dollar amount of mechanisms held for reclamation.

Indicate if any Financial Assurance Mechanisms are pending review by the lead agency and the date and amount of submittal to the lead agency.

Indicate if there has been a change of operator of record since the last inspection and, if so, note the date the change occurred and whether the new operator has signed any document acknowledging reclamation responsibility under the approved reclamation plan and if the new operator has posted a Financial Assurance Mechanism. If a replacement Financial Assurance Mechanism has not been posted, indicate the status of the new operator's replacement Financial Assurance Mechanism. Per PRC § 2773.1(c) and Guideline number 19 of the SMGB's Financial Assurance Guidelines, when operatorship is transferred, "the original financial assurance must remain in effect until the lead agency has approved, following department review, the replacement assurances provided by the successor operator."

The Financial Assurance amount must be adjusted and approved annually to account for new lands disturbed by surface mining operations and lands to be disturbed in coming year, inflation, and reclamation of lands accomplished in accordance with the approved Reclamation Plan (PRC § 2773.1(a)(3) and SMGB Financial Assurance Guideline #16). In order to determine what adjustments, if any, are appropriate to the Financial Assurance Mechanism amount, each mine operator must submit annually a revision of the written Financial Assurance Cost Estimate to the Lead Agency (PRC § 3804(c)). Provide the date of the operator's most recent revision of the Financial Assurance Cost Estimate to the Lead Agency and where appropriate, provide a status of the pending Financial Assurance Cost Estimate. Provide the date and amount of the most recently approved Financial Assurance Cost Estimate.

Also indicate if the Financial Assurance Cost Estimate is under appeal to the lead agency or whether it has been appealed to State Mining and Geology Board as described in PRC § 2770(e).

Use the Financial Assurance "Other" and "Explanation" blocks to provide any other pertinent information regarding the status of Financial Assurance(s). If the operation does not have a sufficient Financial Assurance Cost Estimate and/or Financial Assurance Mechanism, explain in detail.

## SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. <b>[Use separate sheet(s) where necessary. Refer to item numbers below]</b>		CA MINE ID # <sup>91-</sup> <b>43-0004</b>	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
<b>1) General Information</b>	a) limestone cement and aggregate b) 45 million tons total c) Dec. 31, 2030; RPA Table 2 d) N/A (vested mine) e) opens space - hillside Fig 2.3-2	Mine quarry and rock plant operating in accordance with 2012 RPA. See additional comments in attached inspection letter.	<input type="checkbox"/>
a) Permitted Mineral Product(s)			
b) Approved Production Amount (Annual/Gross)			
c) End Date of Operations Per RP			
d) Permit end date			
e) End Use			
<b>2) Boundaries</b>	a) RPA-Fig 1.0-2 - 3,510 ac b) RPA-Fig 1.0-2 - 1,238.6 ac c) RPA-Fig 1.0-2 & 1.0-4 - 1,238.6ac d) variable, see RPA-Fig 3.3-1	Property boundaries in compliance with the 2012 RPA.	<input type="checkbox"/>
a) Property Boundary			
b) Permit Boundary			
c) Rec. Plan Boundary (RPB)			
d) Setbacks			
<b>3) Slopes – Grading</b>	Overburden: a,i) 1.5H to 1V to 2H:1V a,ii) EMSA-2H:1V;WMSA-2.5H:1V N.Pit backfill - 2.5H:1V a,iii) COA 25, 70, b,i) Limestone and greenstone bedrock b,ii) N.Quarry-lmst-1H:1V-overall;50geg-interbench; greenstone 38 to 50 deg. c,iii) reclaimed same as working; RPA 3.17.2	Quarry slopes in compliance with 2012 RPA. WMSA slopes are in compliance, but will be re-grade for final reclamation. EMSA slopes are re-graded to final and capped. County Surveyor will confirm that grades are in compliance with RPA and COAs on October 2, 2015.	<input type="checkbox"/>
a) Fill Slopes – Note Condition of:			
i) Slopes – Working (max/current)			
ii) Slopes – Reclaimed			
iii) Compaction			
b) Cut Slopes – Note Condition of:			
i) Slopes – Working (max./current)			
ii) Slopes – Reclaimed			
<b>4) Erosion Control</b>	a) Oct. 22, 2012 SWPPP; RPA 3.9 b) RPA Appendix F - Chang, 12/12/2012 c) RPA Appendix B - WRA 12/2011; RPA 3.18, 3.19; COAs 68 to 70; 78 to 81	BMPs and stormwater management program is active and winterization is proceeding. See attached inspection rpt. for comments on Crusher slope washout.	<input type="checkbox"/>
a) BMPs			
b) Grading			
c) Vegetation			
<b>5) Ponds</b>	a, b & c) RPA Table 8, RPA-Appendix F; 12/22/2012 SWPPP; COA 33, 83	Ponds functioning and clean out for this winter.	<input type="checkbox"/>
a) Design – Function			
b) Capacity (area/depth/volume)			
c) Maintenance			
<b>6) Stream &amp; Wetland Protection</b>	a to g) RPA 3.18, 3.19; RPA-Appendix D, Table 2; RPA Fig. 3.3-1, COAs 57 to 61	Permanente Creek restoration plan being developed for gov't agency approval in accordance with settlement agreement.	<input type="checkbox"/>
a) Buffers (distance to channel)			
b) Berms (distance/length/height)			
c) Best Management Practices			
d) Drainage			
e) Grading & Slopes			
f) Stockpiles			
g) Stream Diversions			
<b>7) Sensitive Wildlife &amp; Plant Protection</b>	a) RPA 2.9; RPA 3.17.1; RPA-Appendix B; b) RPA-Appendix D-50' setback	Wildlife surveys conducted prior to mining disturbances. Ongoing protection measures being implemented as per RPA & COAs. See attached comments.	<input type="checkbox"/>
a) List Species			
b) Protection Measures			



# INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRRC-1 (4/97) Page 3 and 4 (Rev. 07/13)

## BLOCK VIII: INSTRUCTIONS FOR EACH DATA COLUMN:

**Potential Reclamation Plan Requirements (Column 1):** Under CCR § 3504.5(f), "Inspections may include, but shall not be limited to the following: the operation's horizontal and vertical dimensions, volumes of materials stored on the site; slope angles of stock piles, waste piles and quarry walls; potential geological hazards; equipment and other facilities; samples of materials; photographic or other electronic images of the operation; any measurements or observations deemed necessary by the inspector or the lead agency to ensure the operation is in compliance with Public Resources Code Chapter 9." Column 1 provides a list of items that may be included in the approved reclamation plan, either expressly or by reference as described in PRC § 2772(d), which may include conditions of approval, other permit requirements and supplementary documents, including environmental documents, prepared for the project pursuant to Division 13 (commencing with Section 21000).

It is not expected that all reclamation plans will include each item of Section VIII, or be limited to the items listed. Items in Column 1 that are not operative requirements in the reclamation plan may not need to be addressed by the inspection. Operative reclamation plan requirements not listed in Items 1 through 12 may be listed in Item 13, under "Other Reclamation Plan Requirements."

**Reclamation Plan Requirements (Column 2):** Prior to field inspection, it is recommended that the inspector review the approved reclamation plan and any amendments, as well as any other documents included by reference, including conditions of approval, other permit requirements and supplementary documents, such as environmental documents prepared for the project pursuant to Division 13 (commencing with Section 21000) that specifically relate to reclamation of the mine site. The most recently approved Financial Assurance Cost Estimate and any pending or ongoing enforcement actions should also be reviewed. Conditions of approval that relate to facility operations solely of local concern, such as hours of operation, noise, and dust control are not subject to the inspection.

Column 2 is intended to provide the inspector a place to match any items noted in Column 1 with those items included in the approved reclamation plan either expressly or by reference as described in PRC § 2772(d), which may include conditions of approval, other permit requirements and supplementary documents, including environmental documents prepared for the project pursuant to Division 13 (commencing with § 21000). Also note any Interim Management Plan (IMP) requirements where the mine is subject to an IMP pursuant to PRC § 2770(h).

Indicate the source document for the reclamation plan requirements at the end of the entry in parenthesis; i.e. (COA) (POO) (EIR) (WDR) (SWPPP), etc. Conditions of approval that relate to facility operations solely of local concern, such as hours of operation, noise, and dust control should not be included in Column 2. If items listed in Column 1 of Section VIII of the form are not included in the reclamation plan or other documents included by reference, write not applicable or "NA" in Column 2.

Specific reclamation requirements may not apply to an operation at the time of inspection, but they are important to be aware of to ensure current activity at the site will not prohibit reclamation in accordance with the approved reclamation plan.

A copy of the Surface Mining and Reclamation Act of 1975 and 1993 SMGB regulations may be obtained at <http://www.conservation.ca.gov/omr/lawsandregulations/Pages/SMARA.aspx>.

**Site Conditions and Compliance Issues (Column 3):** Describe current site conditions and compliance issues noted for both operating and reclaimed surfaces that pertain to the reclaimed condition of the mining site. Block IX is provided for additional space to describe site conditions and/or compliance issues. Attach additional sheets as necessary. Evaluations of slope stability and engineered compaction should be prepared by qualified professionals only. PRC § 2774(b) states "The lead agency may cause an inspection to be conducted by a state licensed geologist, state licensed civil engineer, state licensed landscape architect, or state licensed forester, who is experienced in land reclamation and who has not been employed by a surface mining operation within the jurisdiction of the lead agency in any capacity during the previous 12 months."

**VN?** (Column 4): Use this box to indicate if violations were noted for any of the specific items under the corresponding item group heading (e.g., Boundaries, Slopes-Grading, etc.) during field inspection of the site. Enter number of violations in the box.

## SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. [Use separate sheet(s) where necessary. Refer to item numbers below]		CA MINE ID # <b>91- 43-0004</b>	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
<b>8) Soil/Overburden Stockpile Management</b>	RPA 2.6, 3.17.3.1; RPA-Fig 2.6-1 a&b,i) WMSA and EMSA; COA 26 a&b,ii) temp. angle of repose a&b, iii) 12/22/2012 SWPPP; COA 27	2 topsoil storage areas in WMSA and 1 in EMSA. BMPs in place for topsoils storage areas. All overburden and washout fines being placed in North Quarry.	<input type="checkbox"/>
a) Topsoil			
i) Location			
ii) Slope Stability			
iii) BMPs			
b) Overburden			
i) Location	c,i) RPA 3.4, 3.10;RPA-Appendix B;	Soil/overburden stockpile management in compliance with 2012 RPA.	
ii) Slope Stability	c,ii) RPA-Appendix B		
iii) BMPs	c,iii)RPA-Appendix B		
c) Topsoil Application	c,iv) RPA-3.17.3	See attached inspection report for more information.	
i) Amendments			
ii) Depth			
iii) Moisture			
iv) Application Methods			
<b>9) Revegetation</b>	a) RPA-3.17.3.3, RPA-Appendix B, RPA-Fig 2.9-1; COAs 28, 29, 77	Final test plot report submitted Oct. 2014.	<input type="checkbox"/>
a) Test Plots			
b) Species Mix	b) RPA-Tables 3 to 6;	See attached inspection rpt for comments on EMSA re-veg.	
c) Density	c, d & e) RPA-Table 7;	South Exploration area has been revegetated and being evaluated for success.	
d) Percent Cover	f) RPA-3.17.3.2;		
e) Species Richness	g) RPA-3.17.3.5;		
f) Protection	h) RPA-3.17.3.4		
g) Success Monitoring			
h) Invasive Species Control			
<b>10) Structures</b>	RPA-3.20; COA 31	New crusher facility operational. Old crusher removed. New mine office structure completed.	<input type="checkbox"/>
<b>11) Equipment</b>	RPA-3.20; COA 31		<input type="checkbox"/>
<b>12) Closure of Adits</b>		Conveyor tunnel open at this time, will be closed during reclamation.	<input type="checkbox"/>
<b>13) Other Reclamation Plan Requirements</b>	No limestone on surface; remove limestone from stormwater contact; water quality treat to remove selenium; reclaim PCRA	Limestone rock removed from drainage controls. Interim plant for mine water treatment is operational. Restoration plan for PCRA submitted and being reviewed. SFBRWQCB issued consolidated WDR/NPDES permit R2-2014-0010, CA0030210 on March 12, 2014. See attached inspection report for additional information.	<input type="checkbox"/>

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## SURFACE MINING INSPECTION REPORT

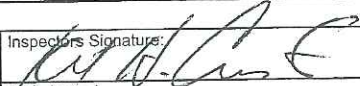
IX. List comments/description/sketches to support observations of mine site conditions, including violations. Where any violations are noted, list in numerical order, along with suggested corresponding corrective actions. Also describe preventative measures recommended by the inspector to avoid or remedy potential violations. Indicate if you have attached photos, sketches, and/or notice(s) of violation(s) or other documents to this form.  
 (Add additional sheets as necessary)

Refer to Attachment A, a report dated September 14, 2015 from Kit H. Custis, CEG 1219, CHG 254 of Michael Baker International Consultants.

Santa Clara County prepares an annual report to the Santa Clara County Planning Commission assessing the July 1 through June 30 reclamation activities and condition compliance with the 2012 Reclamation Plan Amendment. The first annual report, covering July 1, 2013 through June 30, 2014, is attached to this MRRC-1. The next annual report will be presented to the Commission in December 2015.

Additional sheets/documents attached:  Yes  No

CA MINE ID # 91- <b>43-0004</b>
Inspection Date: <b>9/3/2015</b>
Weather Code(s): <b>CR</b>
Duration of Inspection: <b>7 hours</b>
Start Time: <b>9am</b>
End Time: <b>4pm</b>
Status of Mine Code(s): <b>OP</b>
Status of Reclamation Code(s): <b>R - So. Exploration area</b> Approximate Acreage Under Reclamation: <b>19.5 acres</b> Approximate Acreage the lead agency has determined reclaimed in accordance with the approved reclamation plan: <b>NONE</b>
Approximate Total Disturbed Acreage: <b>669.2 ac of 1268.6 acres</b> Approximate Pre-SMARA Disturbed Acreage: <b>49.2 acres</b>
Disturbed Acreage Identified in Most Recent Financial Assurance Cost Estimate: <b>590 acres</b>
Previous Inspection Date (and Number of Violations then Noted): <b>Sept. 4 &amp; 5, 2014; None</b> Violations Corrected? (explain in block to left) <b>None w/2012 RPA</b>
Inspection Attendees and Affiliations: <b>Sam Barket - Lehigh Cliff Maddox - Lehigh Erich Schickenberg - WRA Benjamin Saragusa - WRA Marina Rush - SC County Jim Baker - SC County Steve Beams - SC County Kit Custis - Michael Baker</b>

X. Number of Current Violations:  <b>0</b>	Inspector's Signature:  Date Signed: <b>10/2/2015</b>	If inspector is a contractor for the lead agency give license type and number: <b>Kit H. Custis, CA-CEG 1219 and CHG 254</b>
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October 5, 2015

Marina Rush, Planner III  
SANTA CLARA COUNTY  
70 West Hedding Street  
San Jose, CA 95110

**RE: 2015 SMARA MINE INSPECTION  
CPO FILE 2250-13-66-09PAM (PERMANENTE ROAD)  
PERMANENTE QUARRY, 91-43-0004  
CUPERTINO, CALIFORNIA**

Dear Ms. Rush:

This letter report summarizes the findings of Michael Baker International's (Michael Baker) annual Surface Mining and Reclamation Act (SMARA) site inspection of the Permanente Quarry in Cupertino, CA (Mine ID #91-43-0004) conducted on September 3, 2015. Michael Baker was retained by Santa Clara County to assist County staff with the annual SMARA mine inspection and to provide written documentation of our observations, issues of concern and recommendations.

The 2015 annual SMARA inspection was conducted for 7 hours on September 3, 2015. In attendance, along with myself, were Sam Barket, Cliff Maddox, Erich Schickenberg (WRA) and Benjamin Saragusa (WRA) as representative of the Lehigh Southwest Cement Company (Lehigh), and Marina Rush (Planner III), Jim Baker (County Geologist), and Steve Beams (Construction Inspector) from the Santa Clara County Planning and Development Department (County).

The mine was active during the inspection, but the Rock Plant was not operating. Mining was ongoing in the North Quarry mostly along the western highwall. Overburden materials were being placed against the toe of the southwestern quarry high wall. Waste material in the East Material Storage Area (EMSA) was graded during the last year to create the final elevations and covered with non-limestone rock. The EMSA benched slopes drain towards northeast then southward in a drainage ditch to a pond, and then north again in a wide drainage ditch until stormwater eventually discharges to Permanente Creek from settling Pond 30. A washout of the slope adjacent to the new rock crusher occurred in December 2014. Slope BMPs are installed in the slope washout and repair work is being implemented. Construction of the interim water treatment plant is complete along with a new holding pond and storage tanks in the area between the North Quarry and Permanente Creek. Groundwater monitoring wells, approximately 22, were installed throughout the quarry area as required by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). The mine's entrance is located near latitude 37.321036° and longitude -122.086107°. The weather during the inspection was clear and warm.

The acreage disturbed by current mining activities during the 2015 inspection was approximately 590 acres out of the 1,268.6 acres included in the RPA (2015 FACE). The RPA identifies nine (9) specific



areas within the mining boundary: 1) North Quarry, 2) West Material Storage Area (WMSA), 3) East Material Storage Area, 4) Crusher/Support area, 5) Surge Pile, 6) Rock Plant, 7) South Quarry Exploration Area, 8), Permanente Creek Restoration Area treatment areas (PCRA), and 9) Buffer Areas. Figure 3.3-1 of the RPA provides a map that shows the general location of each mining area and Table 1 lists the acreage.

One area that was not inspected at this time was the 599.3 acres of the Buffer Areas. The Buffer Areas are no-disturbance areas surrounding the active mining areas.

## **BACKGROUND**

The County Board of Supervisors approved a Reclamation Plan Amendment (RPA) for Permanente Quarry on June 26, 2012. Eighty-nine Conditions of Approval (COAs) are applied to the amended reclamation plan that incorporate both SMARA and non-SMARA requirements as well as mitigation and monitoring measures identified under CEQA. The RPA is designed to address mining activity over the next 17 years with an end date of 2032. The 2012 RPA has three phases of reclamation that coincide with the completion of mining and reclamation of the EMSA in Phase 1; backfilling of the North Quarry with WMSA overburden in Phase 2; and final reclamation grading and re-vegetation in Phase 3. Table 2 of the RPA lists the time intervals for each of the three mining phases.

The 2012 RPA changed the final reclamation of the mine from what was approved in the 1985 Reclamation Plan. In some areas, this change is significant. The previous reclamation work done in portions of the north facing slopes of the WMSA will now be removed during Phase 2 as this overburden stockpile is excavated and then placed as backfill in the North Quarry. The RPA now includes the PCRA. The PCRA reclamation activities approved in the RPA has seven (7) restoration subareas within the creek that have been disturbed by previous mining activities.

Lehigh at the request of the SFBRWQCB submitted an application and necessary documents to consolidate the various water quality permits. On March 12, 2014, the SFBRWQCB adopted consolidated waste discharge requirements (WDR) and NPDES permits, Order No. R2-2014-0010, NPDES CA 0030210. This permit allows for discharges to Permanente Creek at six locations, Ponds 4A, 13B, 9, 17 20 and 30. On the same day, the SRBRWQCB adopted a Cease and Desist Order No. R2-2014-0011 that required implementation of an interim water treatment plant to reduce selenium discharges from the mine pit waters. Construction of the interim treatment plant was complete during the 2015 SMARA Annual Inspection. However the interim treatment plant was not processing water or discharging to Permanente Creek because all water collected in the North Quarry was being used for dust control or as process water.

## **SITE CONDITIONS**

This discussion of the mine's existing conditions is broken into sections based on the nine mining areas defined in the RPA. In addition, issues that apply to all or several parts of the mine site will be discussed under separate topics.

## **RPA Mining Areas**

### 1. Quarry.

Quarry operations were apparent during the 2015 inspection. In addition to drilling shot holes, mining excavation work was being done in the west quarry wall (**Photo 1**) with overburden material placed along the western wall of the pit (**Photo 2**). At the end of Phase I, when excavation in the North Quarry ceases, the RPA anticipates that approximately 12 million tons of overburden material generated by the ongoing quarrying will have been placed as backfill in the quarry. An additional 48 million tons of WMSA overburden will also be placed as quarry backfill during Phase II. The current maximum depth of the pit was approximately 625 feet mean-sea-level (msl) (personal communication Cliff Maddox). The maximum anticipated depth of the north quarry is 440 feet msl. The final backfilled reclaimed elevation proposed for the quarry will be between 990 and 1,750 feet msl. The maximum angle of the western backfill slopes is proposed at 2.5H:1.0V. The maximum overall angle of the quarry rock slopes is proposed at 1.0H:1.0V. The northeastern highwall will not be regraded as part of reclamation, while the eastern highwall will have final rock slopes from 2H:1V to 1H:1V (see 12-15-11 Engineering Drawing Details sheet 12 of 13). Mining of the upper portion of the eastern quarry began in 2013 and final 2-horizontal-to-1 vertical (2H:1V) slopes have been cut for most of the upper portions of the slope (**Photo 3**).

As part of the site's stormwater management, numerous rock checkdams have been placed along the haul roads. Limestone check dam materials have been replaced with non-limestone greenstone rock to reduce the potential for selenium to leach into stormwaters.

The northern highwall of the North Quarry has had three large rockslides, which are described in the RPA. No major new movement on these rockslides was observed during the 2015 inspection. The upper portions of the Mid-Pen Rockslide that extends approximately halfway down the eastern highwall was graded out recently during mining (**Photo 3**). The Scenic Easement Rockslide has a slope failure that extends down slope approximately as far as the Mid-Pen Rockslide (**Photo 4**). This rockslide lowered the ridgeline contrary to the 1972 Ridgeline Protection Easement requirement. The largest slide, the Main Rockslide, appears to extend across most of the current height of the northwestern highwall (**Photo 4**).

A fourth apparent landslide occurs on the western side of the pit. This area of movement was noted by Golder and Associates in their November 2007 Slope Stability Evaluation report and may extend westward below the toe of the eastern slope of the WMSA overburden stockpile. The County's Geologist, Mr. James Baker, referred to this western landslide as the "Haul Road Slide." The placement of overburden backfill against the western toe of the North Quarry is intended to stabilize this slide.

### 2. West Material Storage Area (WMSA)

During the 2015 inspection, no overburden material was being placed in the WMSA. All overburden is currently being placed in the Quarry. A new topsoil material storage area was created in 2013 just east of the existing topsoil storage area (**Photo 5**) to take materials excavated with the eastward expansion of the quarry. In addition, large woody debris is being stockpiled on the top of the new topsoil stockpile



for later use in reclamation of Permanente Creek. Both of the WMSA topsoil stockpiles continue to be signed. Beginning around 2021 in Phase 2 of the RPA, approximately 48 million tons of overburden material from the WMSA including wash fines will be placed in the North Quarry to raise the final floor elevation to approximately 990 feet msl. Revegetation efforts along the northern WMSA were observed during the 2015 inspection (**Photo 6**).

Prior to the 2012 RPA, the 1985 Reclamation Plan allowed the overburden placed in the WMSA to remain in place with some final grading to create slopes at a gradient of 2.0H:1.0V or shallower. Recent grading and re-vegetation of the lower northern portions of the WMSA have been done to reduce the visual impact and control erosion (**Photo 6**). Portions of the current southern slopes of the WMSA about a portion of the mine that had been considered pre-SMARA. The 2012 RPA includes grading of the upper portion of this area to increase final slope stability of the WMSA and allow for proper drainage (see RPA Figure 3.16-14). During Phase 2 of reclamation, the WMSA northern fill slope will be excavated down to an elevation that daylight at approximately the current contact between the native vegetation and the revegetated area seen in **Photo 6**.

Running across the pre-SMARA slopes south of the WMSA is an old unpaved mid-slope road that is not used in the current mining operations, but was used in 2015 for placement of several groundwater-monitoring wells as required by the SFBRWQCB. This old unpaved mid-slope road functions like a drainage bench. Low points in this road causes concentrated runoff to discharge over the slope and appear to create a sedimentation problem at Permanente Creek. This condition was noted in the 2008 annual SMARA inspection report, and during the 2009 SMARA inspection a number of large rocks were observed being placed in the largest outfall with the intention of mitigating the potential erosion and instability. In 2014, additional straw waddles and bales were added to the BMPs placed in 2012 and 2013 in the drainage outfalls along the mid-slope road to capture potential sedimentation. Many of these outfall BMPs were re-done in 2015 and appear to be performing as intended (**Photos 7 and 8**). During the 2015 inspection, deposition of fines on top of rock talus were observed as in the 2012, 2013 and 2014 inspections west of the largest drainage outfall from the mid-slope roadway approximately one-third of the way down the slope (**Photo 9**). No increase in the amount of fines in this area was apparent during the 2015 inspections as well as no noticeable slope movement based on the lack of displacement of the silt fencing placed during 2013 (**Photos 10**). The headscarp of this slope failure hasn't extended into the mid-slope road/bench. Hydroseeding of the upper portions of the pre-SMARA slope above the mid-slope road was done in late 2012.

The western portion of the mid-slope bench was re-opened in 2015 to allow for installation of the groundwater monitoring wells required by the SFBRWQCB (**Photo 11**). Wire-supported silt fence and straw waddles have been placed along the re-graded road for stormwater management (**Photos 11, 12 and 13**). The drainage outfalls along this mid-slope bench roadway should continue to be monitored as part of the site's stormwater management. County staff should continue to observe the roadway before the end of November as part of the pre-winter inspection.

### 3. East Material Storage Area (EMSA)

No overburden material or washout fines were being placed in the EMSA during the 2015 inspection. During 2015, the EMSA was graded to final grade and non-limestone rock material was placed as a cap. Lehigh has created a June 2015 contour map of the area, but at the time on the 2015 inspection the County surveyor hadn't completed their review to determine whether the final elevations comply with the 2012 Conditions of Approval (COAs) and RPA. The survey was scheduled for October 1, 2015. During the 2015 inspection, slope BMPs were observed (**Photo 14**) and a non-limestone drainage channel/french drain was constructed along the inside of the main road that runs northeast through the EMSA (**Photo 15**). Drainage from the main EMSA road discharges into a south draining silt fenced ditch that flows into a pond at the southeastern boundary of EMSA (**Photo 16**). This pond then discharges to a wide drainage ditch that flow northward to Pond 30 (**Photos 17 and 18**). Pond 30 lies in the northeastern portion of the EMSA and is a settling pond before EMSA stormwater discharges to Permanente Creek (**Photo 19**). The discharge from Pond 30 is metered (**Photo 20**).

The operator had the northern and eastern boundaries of the EMSA delineated with flagged surveyor lath or metal t-posts and orange safety caps. The County Surveyor re-surveyed the EMSA in January 25, 2013 to check that the grades don't exceed what is permitted in the RPA. At that time the EMSA elevations were found to be in general compliance with the maximum RPA grade of approximately 900 feet msl, but one area near the center of the EMSA was corrected to conform to the approved elevation. Because of the recent grading activity in the northeastern portion of the EMSA, the mine operator's re-surveyed the site. The County surveyor will shoot spot elevations to verify that the final EMSA grades compliance with the maximum elevation requirements in October 2015. The boundary between the eastern EMSA and the cement plant operations was monumented with safety capped metal t-post. Erosion control hydroseeding will be done over the entire EMSA before this winter. The operator intends to monitor water quality of the stormwater discharging from Pond 30 for two years before implementing final reclamation revegetation, in case additional BMP measures are needed.

The operator has created a network of lined and unlined drainage ditches to convey stormwater runoff from the EMSA into holding ponds. During the 2012-13 rainy season a slope failure occurred in a small spill fill previously placed in the upper portion of the drainage just north of the eastern end of the conveyor tunnel. This slope failure deposited limestone rock in the upper portions of the drainage ditch that runs along the western edge of the EMSA. A series of temporarily sedimentation basin were installed in 2014 (2014 Photos 15 and 16), but the area was re-graded in 2015 and the drainage was completely backfilled (**compare 2015 Photo 21 to 2013 Photo 14**). The operator stated that the slope of this canyon backfill would be hydroseeded before winter (personal communication Sam Barket).

County staff should inspect the EMSA channels, ponds and culvert outfall as part of the pre-winter site inspection to document that the structures will function properly.

### 4. Crusher/Support Area

The Crusher and Support area lies southeast of the North Quarry, and contains the primary and secondary crushers and numerous conveyors that transport limestone rock either to the cement plant or to the Surge Pile/Rock Plant. A new primary and secondary crusher was constructed in 2013 and is



operational (**Photos 22 and 23**). The old primary crusher was dismantled in 2014. The new crushers are connected to the existing conveyor system and the portion of the conveyor to the west was removed. The drainage in the new crusher area is directed to a sump and then is pumped over to the North Quarry for treatment. During a rain event in December 2014, the sump overflowed due to a power outage. The overflow discharged onto the adjacent slope and created a large gully (**Photos 24, 25, and 26**). Sediment from the washout discharged into to Pond 13B (**Photos 27 and 28**). Golder Associates prepared a report, dated February 9, 2015, on the slope failure and repair options. The operator indicated that the contract for repairing the slope has been let and work will begin before this winter (personal communication Sam Barket). The County staff should inspect the new crusher area slopes and drainage control as part of the pre-winter site inspection.

The new crusher area has changed the topography from that shown in the 2012 RPA (see 12-15-11 Engineering Drawing Details sheet 12 of 13). The RPA doesn't address how the new crusher area will be reclaimed. In discussion with the operator, they haven't determined the final reclamation grades in the new crusher area. Will the retaining wall for the primary crusher be removed or left in place to stabilize the reclaimed slope? Will the excavation be backfilled and sloped to conform to the topography shown in the approved reclamation plans, or will it remain excavated? The operator should determine the final reclamation topography for the new crusher area and provide the County with a report and grading maps. Determination of the new crusher area's final reclamation may require an analysis of the slope stability, in particular whether the retaining walls for the new crusher should remain in place or be removed. The FACE should then be revised as appropriate to reflect the costs of reclaiming the new crusher area.

The mine offices and mine maintenance facilities are also part of the Support area. Reclamation of the Crusher and Support areas will begin in Phase 3, following the completion of mining and backfilling of the North Quarry. As with other mine areas, the County staff should inspect any drainage channels, ponds, and check dams in the Crusher/Support area as part of the pre-winter site inspection to document that the structures will function properly.

The conveyors and associated structures will be removed from the Crusher and Support areas during reclamation Phase 3. One feature that likely will need special consideration is the 500-foot west-to-east conveyor tunnel. Following the removal of the conveyor system, the tunnel should be closed off to prevent public access. The method of closure isn't specified in the RPA, but consideration should be given to the potential for wildlife inhabiting the tunnel. It is recommended that the wildlife protection and mitigation procedures already specified in the RPA and COAs be applied to the tunnel closure, with adaption as necessary.

#### 5. Surge Pile

The Surge Pile is located between the North Quarry and the Rock Plant and provides a stockpile for aggregate materials processed in the plant. The volume of the surge pile has been reduced from the time of the 2014 annual inspection (**compare Photo 29 to 2014 Photo 24**). Material was conveyed to the Surge Pile after being partially crushed and transported to the Rock Plant as needed either by truck or conveyor. Sedimentation off of the Surge Pile is controlled by barrier berms along the now partially channelized creek. At the time of this inspection, no runoff from the Surge Pile or sedimentation from

the pile to Permanente Creek was observed. The 2012 RPA requires that the Surge Pile area be reclaimed to pre-mining conditions. The Surge Pile partially overlies and buries the historic Permanente Creek bed. Although the 2012 RPA requires reclamation of the Surge Pile be done during Phase 3, this work will like be done sooner as part of the restoration work for Permanente Creek.

#### 6. Rock Plant

At the time of the 2015 inspection, the Rock Plant was not in operation. The Rock Plant area has numerous stockpiles of processed aggregate along with the crushing, sorting and conveying equipment. Runoff from the area is directed to the northeast into Pond 17 located east of the access road in the area of the Rock Plant gate (**Photo 30**). At the time of the 2015 inspection, there was no runoff from the Rock Plant area into Pond 17, the pond was cleaned out and dry. According to D. Zacharisen (personal communication in September 2014), during normal operations Pond 17 water is pumped to Pond 11 for use at the cement plant.

#### 7. South Quarry Exploration Area

The South Quarry Exploration Area lies south of Permanente Creek and was disturbed as part of the evaluation of mineral resources for an area Lehigh calls the South Quarry. (No mineral extraction is approved by the County in this area at this time.) Exploration activities have stopped and the access roads and drill pads have been seeded and erosion control measure put in place. Portions of the South Quarry Exploration Area were observed during the 2013 and 2014 inspections. A more detailed inspection was performed by County staff in 2012. The South Quarry area wasn't inspected during 2015 because the density of the revegetation prevented access to lower roadways and drill pads. The revegetation has been ongoing for approximately 5 years and appears to be functioning properly. **Photo 31** is a Google Earth image from March 2015 of the South Quarry Exploration Area that shows the general progress of the revegetation (compare to Figure 3.16-13 in RPA). At this time, it appears that aerial photo evaluation of the revegetation progress in the South Quarry is the most effective method. On the ground inspections may still be necessary following a significant rain event or whenever aerial photo interpretation identifies any significant erosion or land instability. The mine operator could seek closure of reclamation of the South Quarry Exploration Area after surveys to confirm the revegetation effort meets the RPA performance standard listed in RPA Table 7.

#### 8. Permanente Creek Restoration Area (PCRA)

Permanente Creek flows eastward along the southern edge of the active quarrying area and north of the South Quarry Exploration Area. Disturbance of the creek by mining activities pre-date the 1976 SMARA legislation while some areas of disturbance continued post-1976. The 2012 RPA identifies seven (7) subareas along the creek and provides for area-specific restoration activities (see RPA Section 3.19 and Figure 3.19-10) with the intent that work will be implemented throughout mining Phases 1 to 3 (see RPA Table 11). A recent April 24, 2013 settlement agreement between Lehigh and the Sierra Club requires that the design of the reclamation of Permanente Creek be revised and a new Conceptual Creek Restoration Plan be submitted to all pertinent agencies. The operator indicated that the final plans for the PCRA are still being reviewed by regulatory agencies (personal communication Sam Barket). Once the plans are approved and all permits are obtained, reclamation of Permanente Creek



can begin. When the revised PCRA plans are approved, the FACE should be revised to reflect the cost of implementing the new PCRA plan.

In reporting year 2013, Lehigh submitted several work products relating to the removal of limestone boulders that impact the creek and its water quality (COAs #38 and #39), and began the work. Lehigh selected California Certified Engineering Geologist, Dave Bieber of Geocon Consultants, to identify the boulders for removal. A report was prepared that documents potential the water quality impacts of the boulders in Permanente Creek (Geocon Consulting, August 2012). A supplemental letter from Lehigh, dated July 10, 2013, provided additional information on the potential impacts on sedimentation and hydraulic of the creek from boulder removal. This letter concluded that all but one boulder, #23, could remain in the creek area. A final table listing each boulder to be removed and those to be left in place was submitted in August 20, 2013, based on input and comments from County staff. One boulder (boulder #23) was identified to be potentially removed by hand. However, due to the lack of creek access, combined with the steep and vegetated hillsides, removal would require use of heavy equipment, which would require authorization from the California Department of Fish and Wildlife under Fish and Game Code Section 1602 to evaluate the potential impacts to the creek removal of boulder #23. In accordance with the Best Management Practice for Limestone Boulders from Permanente Creek, County staff has determined that removal of the identified limestone boulders (including boulder #23) is not required because (a) the boulders are not a significant source of selenium and (b) removal of the boulders would result in impacts to Permanente Creek associated with sedimentation and impacts to the hydrology of the creek and existing riparian habitat.

#### 9. Buffer Areas

As discussed above, the Buffer Areas are considered “no disturbance” areas that surround the active mine. The RPA states that the Buffer Areas function to protect the Permanente Quarry from land use encroachment, and also to protect nearby land uses from the potentially adverse sights, sounds and other characteristics of mining. Figure 3.3-1 in the RPA shows the location of the Buffer Areas.

#### **Separate Topics**

##### Topsoil

In order to address the issue of the lack of topsoil for re-vegetation of the site, the operator established topsoil storage areas in both the WMSA and EMSA. The WMSA topsoil storage occurs at two locations. The older location has stopped receiving material and the slopes have erosion controls in place (**Photo 5**). The newer WMSA topsoil storage area is just to the east across the access road and is actively receiving material. Silt fencing is placed at the toe of the newer topsoil stockpile to control sedimentation. A stockpile of large woody debris has been placed at the top of the new WMSA topsoil storage site. This material will be used in the remediation of Permanente Creek. Signs identify both the WMSA topsoil storage areas. In the EMSA, one topsoil storage area remains after the final grading and is surrounded by silt fencing (**Photo 32**). Revegetation of the EMSA may not require much topsoil based on the findings presented in the Reclamation Test Plot Program Final Report by WRA, dated October 2014. Implementation of reclamation revegetation in the EMSA will begin in a few years after the affects of the non-limestone cap on the quality of stormwater discharged from Pond 30 are known. In the



interim, the EMSA will be hydroseeded with an erosion control seed mixture. County staff should periodically inspect to determine that the BMPs in the EMSA are functioning properly.

#### Mined Land Boundary

In September 2011 and again on January 25, 2013, the County Surveyor surveyed the stockpiled material in the WMSA and EMSA to determine whether the mine operator is in compliance with the maximum height conditions. County staff found that the tops of the stockpiles were in compliance with the maximum allowable height conditions for both areas. Now that the EMSA is graded to the final contours and capped with non-limestone material the operator should provide the County with a final EMSA contour map. The County Surveyor should evaluate these contours and determine if they are in compliance with the 2012 RPA and COAs.

#### Stormwater and Water Quality

Lehigh at the request of the SFBRWQCB submitted an application and necessary documents to consolidate the various water quality permits. On March 12, 2014, the SFBRWQCB adopted a consolidated WDR/NPDES permit, Order No. R2-2014-0010, NPDES CA 0030210. This permit allows for discharges to Permanente Creek at six locations, Ponds 4A, 13B, 9, 17 20 and 30. On the same day, the SFBRWQCB adopted a Cease and Desist Order No. R2-2014-0011 that required implementation of an interim water treatment plant to reduce selenium discharges from the mine pit waters. Construction of the interim treatment plant was completed during the 2015 SMARA Annual Inspection.

Lehigh at the request of the SFBRWQCB submitted on October 15, 2013 a workplan prepared by Golder Associates for investigation the EMSA and WMSA runoff and groundwater seepage. The SFBRWQCB issued a Conditional Concurrence letter for this workplan on November 5, 2013. On October 31, 2013, Lehigh submitted at the request of the SFBRWQCB a workplan prepared by Golder Associates to begin a groundwater characterization and detection-monitoring program for the WMSA and EMSA. A second revision of the groundwater workplan was prepared in November 2014. The SFBRWQCB issued a Conditional Concurrence letter for this revised groundwater workplan on January 14, 2015. Groundwater monitoring wells were installed across the mine site as part of the groundwater characterization effort (**Photo 11**).

On June 30, 2014, Lehigh submitted the first annual report for the Selenium Impact Assessment Study prepared by Robertson and Bryan, Inc., to the SFBRWQCB. This report was required by the June 27, 2013 amended Order No. R2-2013-1005-A1. This report addresses the water quality impacts from discharging quarry pit waters. The long-term average discharge rate from the quarry pit is 1,000 gallons per minute (gpm), but can be as high as 2,000 gpm during the wet season. The 2014 WDR/NPDES permit allows an average monthly effluent limitation (AMEL) for selenium of 4.1 mg/L. The current quarry pit water discharges exceed this standard. The 2014 Cease and Desist Order required that a treatment facility for selenium be constructed. Pilot tests for the treatment plant have been completed and the interim treatment plan is constructed (**Photos 33 and 34**). A final Selenium Impact Assessment Report by Robertson and Bryan, Inc., was submitted to the SFBRWQCB in June 2015.

A new lined pond and several tanks have been placed south of the Quarry and west of the treatment plan to hold water pumped from the quarry before it is sent to the interim treatment plant (**Photos 35 and 36**). At the time of the 2015 inspection, the interim treatment plant was not processing water because the mining operations were utilizing all of the water for dust control. The interim treatment plant is allowed to discharge up to 400 gpm of discharge by October 1, 2014 (Table 3 in Cease and Desist Order No. R2-2014-0011). By December 1, 2014, the treatment must achieve a 50% reduction in selenium concentrations (or achieve an effluent concentration of <10 mg/L when influent concentrations are <20mg/L). The interim treatment plant must achieved compliance with the effluent limitations given in Table 1 of Cease and Desist Order No. R2-2014-0011 for discharges at Point No. 001 (pond 4A) by March 31, 2016. By October 1, 2017, the facility must be re-plumbed to the configuration shown in Attachment C, page C-3, of the Order No. R2-2014-0010, NPDES CA 0030210 and the final treatment system must be operational so that all non-stormwater discharges fully comply with all permit requirements.

The operator is continuing to work with the SFBRWQCB to investigate water quality impacts from mining. Lehigh should inform the County of the results of these investigations and provide written copies of all correspondence, approval letters and permits, as soon as available (Conditions of Approval #76, #78, and #79).

#### Wildlife and Vegetation

The operator has conducted a series of re-vegetation test plots to evaluate various soil treatments and to determine what soil and seed combinations will be best for successful re-vegetation. One of these test plots is located in a flat area southeast of the WMSA, called the Yeager Site. A second re-vegetation test plot has been established on the north-facing slope in the EMSA to evaluate various soil treatments necessary for re-vegetation of slopes in that area. Test plots of different re-vegetation treatments in the EMSA appear to be yielding good results. A Reclamation Test Plot Program Final Report prepared by WRA, dated October 2014, was submitted to the County. The findings and recommendations in this report will first be used during the revegetation of the EMSA.

The 2012 RPA approval included a number of conditions that cover wildlife and vegetation (COAs # 46 to #61). These conditions require that pre-disturbance surveys and setback buffers be implemented during critical time periods. Qualified biologists must conduct survey work. These surveys were conducted prior to the expansion of mining into the eastern wall of the North Quarry. During 2015, six biological surveys were conducted for San Francisco dusky-footed woodrat nests (COA 53) and nesting birds (COA 46) between May 6, 2015 and June 5, 2015 by WSA prior to the removal of vegetation needed to install the groundwater monitoring wells in the EMSA and WMSA. WSA also conducted a biological survey in April 2015 the Crusher/Support area at C-Station located in the area of the canyon fill shown in **Photo 21** where three abandoned woodrat nests were found and dismantled in accordance with COA 53; no nesting birds were found. There are also conditions to prevent invasive species and Sudden Oak Death. Evaluation of compliance with wildlife and vegetation protections was not done as part of this inspection effort. Either County staff or their consultant will evaluate compliance with wildlife and vegetation conditions.



## **VIOLATIONS**

With the approval of the RPA by the Santa Clara County Board of Supervisors on June 26, 2012, past SMARA violations were resolved. The operator continues to work with the SFBRWQCB to provide permit applications, workplans, technical reports and monitoring reports that address water quality requirements for the mine waste rock, stormwater, groundwater and process waters. The SFBRWQCB has a web site where Lehigh Permanente documents can be found, [http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/hot\\_topics/lehigh.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/hot_topics/lehigh.shtml).

The County issued a Corrective Action letter on December 19, 2014 that required immediate action on two areas of concern identified by County staff. One area of concern was the effectiveness of the BMPs in the EMSA. This issue appears to have been corrected with the recent re-grading to final reclamation grade and BMPs installation. County staff should continue monitor the EMSA for compliance with RPA and COAs. The second area of concern was the slope washout and debris flow at the new rock crusher. The County required immediate installation of soil stabilization measures and BMPs to prevent further debris flow and sedimentation into Pond 13. It appears that these measure were installed (**Photos 24, 25 and 26**). As discussed above in item no. 4-Crusher/Support Area, the operator indicated that soil stabilization measures to backfill the washed out area and support the foundation of the crusher sump are beginning and will be completed before this winter. During the 2015 inspection no other SMARA violations were noted.

## **AREAS OF CONCERN AND ISSUES TO MONITOR**

Quarry and reclamation activities are in compliance with the approved 2012 Reclamation Plan Amendment. Issues to continue monitoring are as follows:

1. Implementation of the slope washout backfill and sump foundation stabilization work in the new crusher area should be started and completed before this winter. County staff should make periodic inspections of this work. Should this work not be fully completed before start of winter, the operator should install all BMPs and slope stabilization measure necessary to stabilize the area over the winter.
2. Continue monitoring the WMSA and EMSA for stability and erosion control. Prior to this winter, condition of check dams, drainage channel armor and drainage outfalls should be inspected by the County. The mid-slope road south of the WMSA should be monitored for erosion control and instability. The drainage on the north side of the WMSA should continue to be monitored and modified, as necessary to prevent erosion. The recently re-graded EMSA should be periodically inspected by the County to ensure that all drainages are functioning properly and erosion is minimal.
3. Continue monitoring rockslides in North Quarry and the operator should notify the County if new landslides occur, or the existing rockslides enlarge, particularly further into the 1972 Ridgeline Protection Easement. Continue monitoring the western quarry slide area that may underlie the haul road.
4. The operator should continue to work with the SFBRWQCB and the County to provide information required for compliance with water quality regulations. The operator should provide



to the County copies of documents submitted to the SFBRWQCB. The County should periodically assess how investigations being conducted for the SFBRWQCB will impact reclamation of the mine.

## **FINANCIAL ASSURANCE**

The operator submitted a revised financial assurance cost estimate (FACE) dated September 29, 2015 based on draft written comments provided by Michael Baker to the County on August 20, 2015. Final review of the revised FACE is pending. When the County certifies the 2015 FACE, it will forward the calculations to OMR for its 45-day review.

## **CONCLUSIONS AND RECOMMENDATIONS**

Permanente Quarry is in compliance with SMARA, and is working with the SFBRWQCB on water quality requirements, workplans, investigations, treatment plant operations, and compliance with discharge permits. The following tasks should be undertaken to control potential erosion and maintain slope stability on the site:

1. The washout area in the slope adjacent to the new crusher should be repaired and revegetated. County staff should continue to periodically inspect the performance of this repair and take corrective action as necessary.
2. The perimeter slopes of the WMSA and EMSA rock storage piles should continue to be monitored for erosion control and modified, as necessary.
3. The mitigation measures implemented to control runoff from the road running mid-slope south of the WMSA should be monitored and modified, as necessary.
4. The final report of the re-vegetation test plots was submitted to the County and recommendations will be first implemented in the EMSA.
5. The drainage ditches and sediment catch basins constructed in the EMSA rock storage area should be monitored, cleaned out, and repaired as necessary.
6. The rock-armored outfall of the stormwater Pond 30 should be monitored and modified, as necessary.
7. The operator's geotechnical consultant should continue to monitor the long-term stability of the highwalls in the North Quarry, and the slope on the south side of the WMSA rock storage pile. The mine operator and geotechnical consultant should report to the County, as soon as possible, any changes in the stability of the mine slopes.
8. The results of the County Surveyor's field check of the final grades of the EMSA determine compliance with the 2012 RPA and COAs should be placed in the file along with the results of any corrections.
9. The operator should continue to provide to the County updated maps of material stockpile locations, as soon as possible, but at least each year before the annual inspection.
10. The County should remain in contact with the SFBRWQCB regarding water quality investigations. The mine operator should inform the County when results of water quality investigations may impact reclamation of the mine.

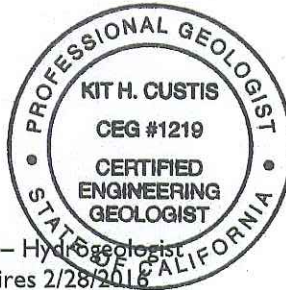
11. When the PCRA remediation plan is approved by the SFBRWQCB and other permitting agencies, the plan should be incorporated into the RPA. Pending this plan's approval, the County should continue with implementing the PCRA mitigation measures and conditions that are part of the June 26, 2012 RPA approval.
12. The erosion control measure implemented along the slopes draining to Permanente Creek should be monitored and repaired as necessary.

#### LIMITATIONS

Our services are limited to providing professional opinions and recommendations made in accordance with generally accepted engineering geology principles and practices. No warranty, expressed or implied, of merchantability or fitness, is made or intended in connection with our work, by our proposal for consulting or other services, or by our oral or written reports or findings. Our services have been limited to review of the Reclamation Plan as provided by the County, review of previous available annual SMARA inspection reports, visual field inspections, discussions with the County and operator staff, and the preparation of this letter report.

If you have any questions, please feel free to contact me at 1-(866) 828-6762 or e-mail me at [kcustis@mbakerintl.com](mailto:kcustis@mbakerintl.com).

Sincerely,  
Michael Baker International



Kit H. Custis, Engineering Geologist – Hydrogeologist  
PG 3942, CEG 1219, CHG 254; Expires 2/28/2018

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**2015 SMARA INSPECTION PHOTOS**

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Photo 1: North Quarry, looking north. Waste rock material being placed at toe of western slope. Floor elevation of quarry at approximately 625 feet msl. Dated September 3, 2015.



Photo 2: North Quarry western highwall with backfill. Dated September 3, 2015.



Photo 3: North Quarry eastern highwall at left side of photo. Upper portion near final reclamation grade. Mid-Pen Rockslide in right center of photo. Dated September 3, 2015.



Photo 4: Looking north at the North Quarry. Main Rockslide on left, Scenic Easement Rockslide in center and remnants of Mid-Pen Rockslide on right. Compare to Photos 4, 5 and 6 in 2014 inspection report. Dated September 3, 2015.



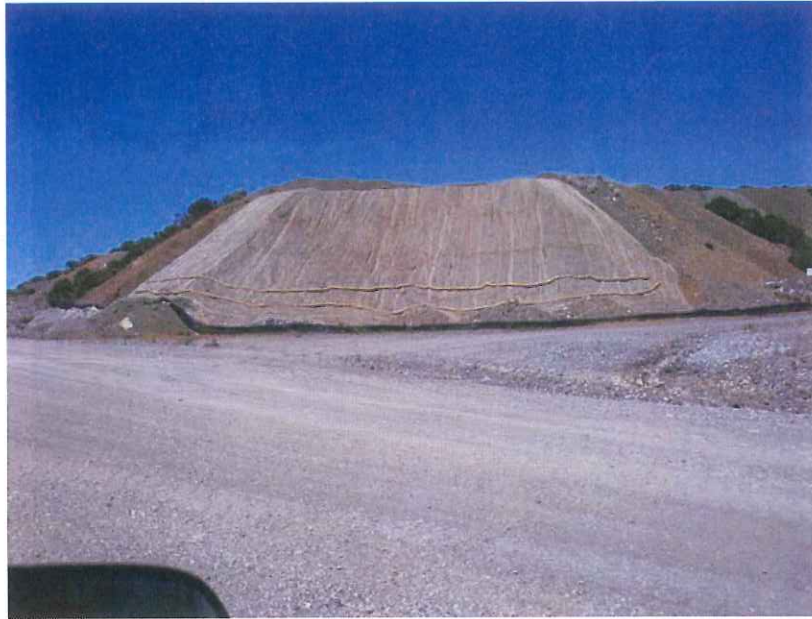


Photo 5: Looking northwest at older topsoil stockpile in WMSA. Dated September 3, 2015.



Photo 6: Portion of re-vegetated north-facing slope of WMSA, looking east. A portion of this slope will be removed in Phase 2 to backfill of North Quarry. Dated September 3, 2015.





Photo 7: Straw waddle and haybale BMPs placed along mid-slope bench roadway in southern WMSA slope. Dated September 3, 2015.



Photo 8: Rocked outfall in mid-slope bench on southern WMSA slope, looking southwest. Dated September 3, 2015.



Photo 9: Looking downslope from rockied outfall shown in Photo 8 at silt fencing and area where soil mixed with talus was observed in 2012, 2013 and 2014 that may be the result of past slide; silt fence shows no visible significant displacement. Dated September 3, 2015.



Photo 10: Silt fencing on southern slope of WMSA below mid-slope bench; silt fencing shows no visible significant displacement. Dated September 3, 2015.





Photo 11: Silt fencing on mid-slope bench roadway at western end showing protective riser for groundwater monitoring well. Dated September 3, 2015.



Photo 12: Silt fence and straw waddle BMPs along outer edge of mid-slope bench in southern slope of WMSA required by regrading the roadway for the installation of groundwater monitoring wells. Dated September 3, 2015.





Photo 13: Silt fence BMP along outer edge of mid-slope bench in southern slope of WMSA required by regrading the roadway for the installation of groundwater monitoring wells. Dated September 3, 2015.

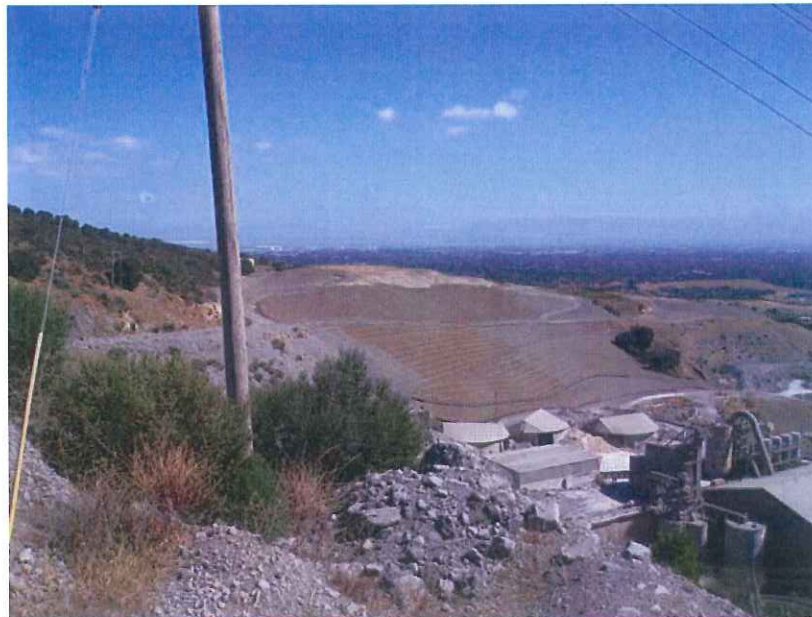


Photo 14: EMSA looking northwest at BMPs installed on finish grade slopes. Dated September 3, 2015



Photo 15: Non-limestone drainage channel/French drain on inside of main roadway in EMSA looking south. Drain discharges into channel shown in Photo 16. Dated September 3, 2015.

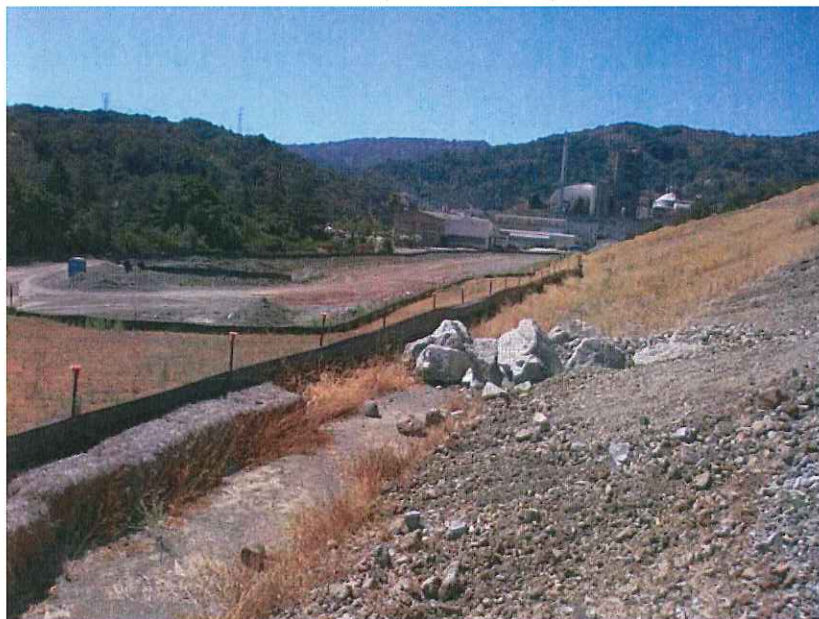


Photo 16: Looking south at a drainage channel running along the right side of the silt fence that takes EMSA runoff from a pipe discharging at the pile of rocks and then conveys it to the south into a sediment catch basins. Dated September 3, 2015.





Photo 17: Looking south at drainage channel that flows northward to discharges EMSA stormwater into Pond 30. Dated September 3, 2015.



Photo 18: Pond 30 with outfall that discharges into Permanente Creek. Dated September 3, 2015.





Photo 19: Pond 30 rocked outfall to Permanente Creek. Dated September 3, 2015.



Photo 20: Pond 30 metered outfall to Permanente Creek. Dated September 3, 2015



Photo 21: Looking west at fill placed in a drainage to mitigate past slope failures below conveyor that deposited limestone waste rock into EMSA drainage. Slopes will be hydroseeded before this winter. Compare with Photo 14 in 2013 Annual Inspection report. Dated September 3, 2015.

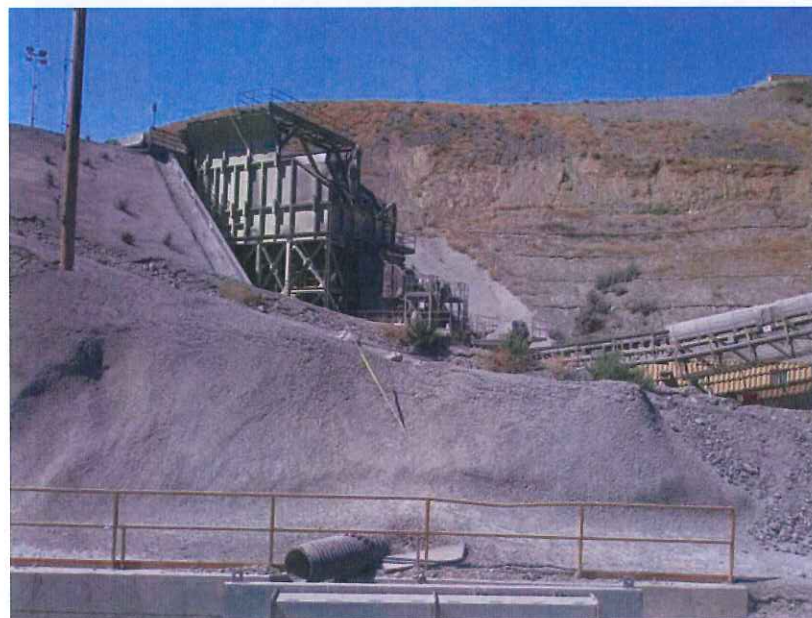


Photo 22: New primary crusher looking north. Drainage sump in foreground. Dated September 3, 2015.





Photo 23: New crusher area conveyors looking northeast. Dated September 3, 2015.



Photo 24: Upper portion of slope washed out by overflow of crusher sump. Sump wall exposed in lower right of image, looking west. Slope repair will need to underpin foundation of sump. Dated September 3, 2015.





Photo 25: Looking northwest from the area of Pond 13B at the washed out slope caused by overflow of the new crusher sump in December 2014. Dated September 3, 2015.

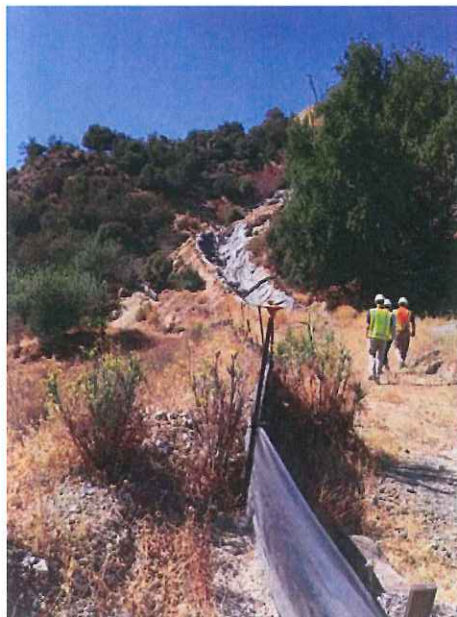


Photo 26: Looking northwest at the lower portion of washed out slope caused by overflow of the new crusher sump in December 2014. Dated September 3, 2015.



Photo 27: Lower portion of washed out slope caused by overflow of the new crusher sump in December 2014. Material discharged into Pond 13B. Dated September 3, 2015.



Photo 28: Looking north at Pond 13B with sediment fan created by washed out slope caused by overflow of the new crusher sump in December 2014. Dated September 3, 2015.



Photo 29: Looking southeast at Surge Pile along north side of Permanente Creek. Volume of material is less than in 2014. Compare with Photo 24 in 2014 Annual Report. Dated September 3, 2015.



Photo 30: Pond 17 looking south at Rock Plant. Rock Plant was not in operation at the time of the 2015 inspection. Dated September 3, 2015.





Photo 31: Google Earth Image of South Quarry Exploration area, dated March 2015.



Photo 32: Topsoil stockpile in EMSA surrounded by silt fencing. Dated September 3, 2015.



Photo 33: Interim treatment plant at south of North Quarry. Plant discharges to Pond 4A and then to Permanente Creek. Plant wasn't operating at time of 2015 inspection because all water was being used in mining operations. Dated September 3, 2015.



Photo 34: Interim treatment plant south of the North Quarry, looking west. Dated September 3, 2015.





Photo 35: Looking south at the new lined pond south of the North Quarry that holds water for discharge to the interim treatment plant shown in Photos 33 and 34. Dated September 3, 2015.



Photo 36: Holding tanks and new lined pond south of North Quarry that discharge to the interim treatment plant shown in Photos 33 and 34. Dated September 3, 2015.